REMARKS

Claims 11-20 were previously pending in the application. By the Amendment, Claims 11 and 18 are currently amended and Claims 12-17 and 19-20 remain unchanged.

The Applicants acknowledge the rejection based on double patenting and defer substantive response until examination of both applications is essentially completed.

Claim 18 is under objection for an apparent redundancy which has been cured by the present amendment. The term "qualitative" was used twice, wherein the term "quantitative" was intended for one of those uses. The amendment to claim 18 cured the deficiency.

Substantively, the claims stand rejected under the cited prior art of record. Specifically, Claims 11-13 were rejected under 35 USC §102(b) as being anticipated by US Patent No. 3,359,153 to Wennerberg et al. (Wennerberg '153). Claims 12-20 were rejected under 35 USC §103(a) as being unpatentable over Wennerberg '153 in view of US Patent No. 4,982,606 to Adamski (Adamski '606).

Independent Claim 11 recites a dishwasher including at least one washing container for receiving items to be handled, with the items to be handled being subjected to an operative handling cycle including at least one of a washing step, a rinsing step and a drying step wherein the washing step includes introduction of a cleaning agent and a fluid carrier forming a washing fluid and the rinsing step includes introduction of a rinsing fluid; and a system for recognition of the fluid level of the washing fluid contained in the dishwasher. The fluid level recognition system includes at least one capacitive filling level sensor having at least two probes, forming two capacitor plates, operatively coupled to a sensor surface and projecting into the washing container for operative contact with the washing fluid, thereby using the washing fluid as a dielectric

having a dielectric constant that changes with the fill level of the washing fluid. At a first fill level the probes and the washing fluid form a capacitor having a first capacitance value indicating a first fill level and causing the filling level sensor to sense the first fill level and at a second fill level the probes and the washing fluid form a capacitor having a second capacitance value indicating a second fill level and causing the filling level sensor to sense the second fill level. The present invention provides a fluid level sensor using a continuously variable capacitor as a sensor element, thereby providing continuously variable indications of fluid fill level in the wash chamber of a dishwasher.

Wennerberg '153 discloses a water level indicator for a dishwasher that provides an indication of three distinct fill levels based on the actuation of three individual sensors. As the water level rises, output signals are sequentially produced by the low-level sensor 26, the medium level sensor 28 and the high-level sensor 30 as depicted schematically in Figure 1. (Col. 2, ll. 61-64). This specification indicates that the sensor may be of any well-known type, such as an electrode gap, capacitive, thermal, optical, etc. in a manner to sense the water level in the machine chamber. (Col. 2, ll. 64-67). Accordingly, each sensor in Wennerberg '153 senses the presence of water at that sensor and the positioning of the sensor in cooperation with the positioning of the other respective sensors in the circuit provide an indication of one of three discreet fill levels.

In substantial structural and operational contrast, the present invention provides a single filling level sensor that detects continuous variations in the fill level in the water chamber of the dishwasher by using the washing fluid itself as part of the capacitor that is the sensor. The washing fluid water forms the dielectric while the sensor includes two probes projecting into the water chamber for contact with the washing fluid. While the two probes form the capacitor plates and the washing fluid acts as the dielectric, each position of the washing fluid naturally means a change in water volume which means a change in the dielectric constant of the sensing capacitor. Therefore, at a first fill level, the capacitor has a first capacitance based on the first dielectric constant provided by the

first water level. At other subsequent fill levels, the dielectric constant is different than the dielectric constant at the first fill level and therefore the capacitance of the capacitor is different from the first capacitance at the first fill level. The presently amended claims set forth this structural distinction and it is herein asserted that the Wennerberg '153 patent cannot be used to either anticipate the present invention or render the present invention obvious when combined with Adamski '606 or any other reference.

Adamski '606 fails to cure the deficiencies of Wennerberg '153 with respect to the present invention. While Wennerberg '153 teaches the use of three sensors for detecting discreet levels of water in a wash container by sensing the presence of the water at each sensor, nothing in Wennerberg '153 teaches the use of continuously variable capacitance to determine a continuously variable water level. By listing the various types of sensors, Wennerberg '153 asserts their commonality for substitution as the water level sensor. The electrode gap, capacitive, thermal, and optical all have the common ability to detect the presence or absence of water at a particular level or position. None of these sensors, save the capacitive sensor, can be used to vary capacitance to determine a continuously variable fill level. Therefore, the use of the capacitor for its ability to detect the presence or absence of water does not provide the necessary teaching that would direct one of ordinary skill in the art to use the capacitor in a manner wherein the water itself, i.e. the medium to be studied, is used as a dielectric for the capacitor or sensor itself. Therefore, there is no teaching or suggestion to combine Wennerberg '153 and Adamski '606, and, therefore, Adamski '606 cannot be combined with Wennerberg '153 to achieve the present invention. Such a combination would not result in the present invention and therefore, the combination is improper. Once again, the combination of Wennerberg '153 and Adamski '606 has been determined to be improper and cannot be used for rendering the present invention, as set forth in claims 12-20, obvious.

For these and other reasons, Wennerberg '153 does not disclose the subject matter defined by independent Claim 11. Therefore, Claim 11 is allowable. Claims 12-20